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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Attorney Docket No.: 2950.19US02

KUMAR et al.

Confirmation No.: 1878

Application No.: 10/827,072

Examiner: Unknown

Filed: April 19, 2004

Group Art Unit: 1745

For: LITHIUM METAL OXIDES

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. § 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached Form PTO-1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This information is being filed before the mailing date of a first Office Action on the merits. No certification or fee is required.

The Examiner's attention is directed to co-pending U.S. Patent Application No. 09/595,958, filed June 19, 2000, which is directed to related subject matter. The identification of this U.S. patent application is not to be construed as a waiver of secrecy as to that application

Application No. 10/827,072

now or upon issuance of the present application as a patent. The Examiner is respectfully requested to consider the cited application and the art cited therein during examination.

Copies of the references were cited by or submitted to the Office in Patent Application No. 09/595,958, filed June 19, 2000, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these references are not attached. 37 C.F.R. § 1.98(d).

This application was filed after June 30, 2003; therefore, copies of cited U.S. patents and U.S. published applications are not included.

Respectfully submitted,



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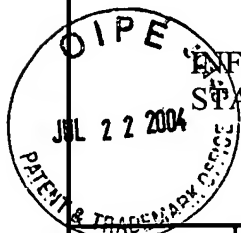
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Peter S. Dardi
Peter S. Dardi



Substitute for form 1449/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/827,072
Filing Date	April 19, 2004
First Named Inventor	Kumar et al.
Art Unit	1745
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Attorney Docket Number	2950.19US02

Sheet 1 of 5

U.S. PATENT DOCUMENTS

EXAMINER INITIAL*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number-Kind Code ² (if known)		
		US- 4,366,215	12/1982	Coetzer at al.
		US- 4,687,643	08/1987	Cortesi et al.
		US- 4,770,960	09/1988	Nagaura et al.
		US- 4,980,251	12/1990	Thackeray et al.
		US- 5,013,706	05/1991	Schramm et al.
		US- 5,017,446	05/1991	Reichman et al.
		US- 5,211,933	05/1993	Barboux et al.
		US- 5,264,201	11/1993	Dahn et al.
		US- 5,273,848	12/1993	Noguchi et al.
		US- 5,290,592	03/1994	Izuchi
		US- 5,312,611	05/1994	Takami et al.
		US- 5,425,932	06/1995	Tarascon
		US- 5,443,809	08/1995	Olsen
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		US- 5,486,346	01/1996	Fey
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		US- 5,591,546	01/1997	Nagaura
		US- 5,601,796	02/1997	Frech et al.

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)			
		WO 96/12676	05/02/1996		
		WO 97/20773	06/12/1997		
		WO 97/37935	10/16/1997		
		WO 00/27754	05/18/2000		
		WO 00/46867	08/10/2000		

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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

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		Number-Kind Code ^{2 (if known)}			
		US- 5,614,472	03/1997	Riddle et al.	
		US- 5,631,105	05/1997	Hasegawa et al.	
		US- 5,641,465	06/1997	Ellgen et al.	
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		US- 5,674,644	10/1997	Nazri	
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		US- 5,911,920	06/1999	Hasezaki et al.	
		US- 5,928,622	07/1999	Hwang et al.	
FOREIGN PATENT DOCUMENTS					
EXAMINER INITIAL [*]	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)			
		EP 0 492 880 A2	07/01/1992		
		EP 0 117 755 A2	09/05/1984		
		EP 0 820 113 A1	01/12/1998		
		EP 0 837 036 A1	04/22/1998	abstract	
		UK 2 299 988 A	10/23/1996		
		JP 2296732 A		abstract	
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<p><small>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small></p> <p><small>¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.</small></p> <p><small>This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.</small></p>					

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		Number-Kind Code ² (if known)			
		US- 5,952,125	09/1999	Bi et al.	
		US- 5,958,361	09/1999	Laine et al.	
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		US- 6,136,287	10/24/2000	Horne et al.	
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				First Named Inventor	Kumar et al.
				Art Unit	1745
				Examiner Name	Unknown
Sheet	4	of	5	Attorney Docket Number	2950.19US02
NON PATENT LITERATURE DOCUMENTS					
EXAMINER INITIAL*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T ²
		COLBOW et al., "Structure and Electrochemistry of the Spinel Oxides LiTi ₂ O ₄ and Li _{4/3} Ti _{5/3} O ₄ ," Journal of Power Sources, 26, pp. 397-403, 1989			
		DARLING et al., "Modeling a Porous Intercalation Electrode with Two Characteristic Particle Sizes," Journal of the Electrochemical Society, Vol. 144, No. 12, pp. 4201-4208, December 1997			
		FERG et al., "Spinel Anodes for Lithium-Ion Batteries," The Electrochemical Society, Vol. 141, No. 11, pp. L147-L150, November 1994			
		INAGAKI et al., "Lithium Insertion into Vanadium Oxide Bronze Containing Nickel," Solid State Ionics 78, pp. 275-279, February 1995			
		KIM et al., "Nanocomposite Manganese Oxides for Rechargeable Lithium Batteries," Electrochemical and Solid-State letters, 1(5), pp. 207-209, 1998			
		KUWAI et al., "A New Lithium Cathode LiCoMnO ₄ : Toward Practical 5 V Lithium Batteries," Electrochemical and Solid-State Letters, 1(5), pp. 212-214, 1998			
		OHZUKU et al., "Zero-Strain Insertion Material of Li [Li _{1/3} Ti _{5/3}]O ₄ for Rechargeable Lithium Cells," J. Electrochem. Soc., Vol 142, No. 5, pp. 1431-1435, May 1995			
		PERAMUNAGE et al., "Preparation of Micron-Sized Li ₄ Ti ₅ O ₁₂ and its Electrochemistry in Polyacrylonitrile Electrolyte-Based Lithium Cells," J. Electrochemical Society, Vol. 145, No. 8, pp. 2609-2622, August 1998			
		STOYANOVA et al., "Effect of Mn-Substitution for Co on the Crystal structure and Acid Delithiation of LiMn _y Co _{1-y} O ₂ Solid Solutions," Solid State Ionics 73, pp. 233-240, July 1994			
		TREUIL et al., "Relationship Between Chemical Bonding Nature and Electrochemical Property of LiMn ₂ O ₄ Spinel Oxides with Various Particle Sizes: Electrochemical Grafting Concept," J. Phys. Chem B, Vol. 103, No. 12, 1999, pp. 2100-2106			
EXAMINER SIGNATURE				DATE CONSIDERED	
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.</p> <p>This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.</p> <p style="text-align: center;"><i>If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.</i></p>					



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Sheet 5 of 5

NON PATENT LITERATURE DOCUMENTS

EXAMINER INITIAL*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
		ZAGHIB et al., "Electrochemistry of Anodes in Solid-State Li-Ion Polymer Batteries," Journal of the Electrochemical Society, Vol. 145, No. 9, pp. 3135-3140, September 1998	
		Oak Ridge National Laboratory, "Thin Film Rechargeable Lithium and Lithium-Ion Batteries," September 1999, 19 pages	
		International Search Report (PCT/US01/40979) dated October 5, 2001	
		Written Opinion dated 17 June 2002 (PCT/US01/40797)	

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